

EMERGENT GEOGRAPHIES OF TECHNO-BIOLOGICAL CHANGE  
GEOG 675  
Fall 2012  
T, TH 9:30-10:45

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**Office hours:** T 11:00-12:00, W 1:00-2:00, or by appointment

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This course takes as its starting point the long-standing proposition that humans and their environment are co-produced. But it proceeds by taking up a series of contemporary transformations that have made our ability to distinguish between the categories of human and environment—along with those of biology and technology, nature and culture, living and nonliving—increasingly difficult.

This course is first and foremost about the products and processes of techno-scientific endeavors and their spatial foundations and ramifications. In it, we will investigate recent transformations in how we consider, use, respond to, and (re)create our material landscape, particularly vis-à-vis our own bodies, behaviors, and subjectivities as ‘humans.’ We will read from a number of perspectives on techno-scientific trends that connect to global health care, the biotech and pharmaceutical industries, and political security. Through those readings, we will map connections between techno-science and social, political, and economic dynamics around the world and address the following questions: In what ways have recent transformations in biological science and technological engineering altered how we conceptualize and interact with our environment and with “life” in general? How has biological life become a site of technological production and political engagement in new ways? How do biological and technological transformations bear on our conceptions of space and institutions of democracy, global capitalism, and the nation-state? And, how do we envision and articulate the ethical and political implications of these transformations? There are ambitious questions, but throughout the term we will explore them bit-by-bit.

By the end of the course, students will be able to:

- ⊕ Critically assess the implications of biological and technological change in reference to global capitalism, privatization/commodification, democracy, and self-governance from a number of contexts.
- ⊕ Link analysis of transformations in science and technology to major institutional trends (such as actions of health care corporations, the pharmaceutical and biotech industries, and geopolitical events) and assess their geographical significance.

- ⊕ Critically evaluate the literatures and theories discussed in the course by analyzing a scholarly resource, object or event, or by developing a research project based on a case study of the student's choice.
- ⊕ Be able to identify novel research questions related to course themes.

## REQUIRED TEXTS

All of the required texts will be available on the course website.

## REQUIREMENTS, EXPECTATIONS, & GRADING

In this course you will be expected to do the following:

- ⊕ I will give regular lectures for part of each class. However, you should expect the course to be highly interactive; your participation in class will be central to the success of the course (and also to how much you learn). I will ask frequent questions of you, but I will also expect you to ask frequent questions of me. I further encourage you to engage with each other's ideas. This last point is central - the class is not meant to be a conversation between 'me' and 'you', but between all of us. To succeed in this class you will need to read closely and pay attention to the arguments in our texts. You will also be asked to critically evaluate the ideas presented in lecture, course readings, and those brought forward by your classmates; you will need to question them, dispute them, or make them your own. The objective is for you to learn to develop defensible positions - not just 'opinions' - on what is happening in the complex socio-ecological worlds you inhabit, and what might constitute a coherent ethical/political response. Topics of discussion will emerge from material in lectures as well as the assigned readings.

As part of your in-class participation, our course will keep an online blog, at <http://technobiogeo.wordpress.com/>. You will also engage with one another and the readings by posting weekly comments and questions on the blog. See below for blog posting assignments. **Attendance and Participation (online and in class) is worth 25% of the final grade.**

- ⊕ Each Monday, throughout the semester, we will take turns posting commentaries on our weekly readings online. All students will sign up at the beginning of the term to schedule their postings. These online commentaries - they should be between 600-1000 words - will serve the function of beginning our discussions each week and keying us in to the key elements of our reading. They will be posted no later than NOON on Monday (except where noted). Students for whom it is not their week to post, are required to entire brief commentaries or questions on the post before class time on Tuesday. Commentaries and comments should be written in formal (and respectful) academic prose and be free from errors. **Blog commentaries are worth 25% of the final grade.**

- ⊕ All students will write ONE (out of three possible) longer, formal essays of about 1,500 words on one of the course themes of your choosing. These essays are meant to critically engage with our readings. **Short Essays are worth 15% of the final grade.**
- ⊕ There are three options for the final project, all reflecting different elements of the learning goals stated above. Students should work with me to select a project that best suits their research and learning goals.  
PROJECTS ARE DUE BY NOON FRIDAY, DECEMBER 21<sup>ST</sup>.
  1. Write a 12-15 page research paper related to the themes of the course. This is a good option for anyone interested in exploring the course themes or related topics further. Paper topics should be developed in consultation with the instructor.
  2. A 10-12 page review of a recent monograph/book related to the themes of the course with the aim of publishing the book review in an academic (or literary) journal. The content and target journal for the review should be discussed with the instructor ahead of time, and should be written in accordance with the specific submission criteria of that journal. The student will be expected to contact book review editors to assess interest during the initial weeks of the course, and will be expected to pursue publication even if this extends after the semester.
  3. An essay analyzing an object, event, or trend of your choosing using the themes, readings, and tools that we have developed throughout the course. This could be a film, a novel, a piece of art, a kind of technological innovation, etc. You will choose and develop your project in close collaboration with the instructor.

With all options, students must discuss their topics with me in person by November 09<sup>th</sup> and turn in an Annotated Bibliography for their project by November 30<sup>th</sup>. We will discuss these components in greater detail closer to the deadline.

During the last week of class, students will all present their projects to the class. We will speak in more depth about these assignments as need arises. **Final Projects are worth 25% of the final grade, Final Project Presentations are worth 10%.**

### WORKLOAD

This is a three-credit course. You should expect to spend nine hours per week on this course (three hours and 15 minutes in class; five hours and 45 minutes outside the classroom). This includes all lectures, readings and writing assignments.

*A Note Regarding Readings:* This course is reading intense. As you read for class you should be taking notes and identifying the main arguments that the author is making as well as the kind of evidence they use to support that argument. You should consider your own position on the value of the author's arguments, the importance of its contributions, as well as its potential limitations. To do so requires reading the assigned texts *critically*. By 'reading critically' I mean not only reading for content,

but questioning the articles and books you read. No author simply presents 'facts' or the 'truth'. Rather, they present a set of more or less logical, more or less coherent, and more or less persuasive arguments about the topic they are addressing. Your task as a reader and commentator is not simply to absorb those ideas, but to understand *how* the arguments are made, how they are (or are not) supported, and why they are (or are not) persuasive. If you find them unpersuasive or unclear, what questions would you raise to the author (or to me and your classmates) about the arguments? How could you strengthen the arguments, or suggest alternatives?

## GRADING STANDARDS

A -- achievement is outstanding relative to the level necessary to meet course requirements.

B -- achievement is significantly above the level necessary to meet course requirements.

C -- achievement meets the course requirements in every respect.

D -- achievement is worthy of credit even though it fails to meet fully the course requirements.

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F -- achievement is inadequate and no credit will be given for the course.

I -- (Incomplete) I will give incompletes only in the event of remarkable circumstances that are discussed with me well in advance of the end of the term.

## CLASS SCHEDULE

### September 4: Introduction

Course overview & expectations

Thacker, Eugene. 2010. Preface. *After Life*. Chicago: University of Chicago Press: ix-x.

### September 6: From Social Constructivism to Materialist Geographies

Whatmore, Sarah. 2006. Materialist returns: practicing cultural geography in and for a more-than-human world. *Cultural Geographies*, 13: 600-609.

### September 11, 13: Approaching Emergent Techno-Biologies

Escobar, Arturo. 2000. Welcome to Cyberia: Notes on the anthropology of cyberculture. In Bell and Kennedy, eds. *The Cybercultures Reader*. London: Routledge, 56-76.

Collier, Stephen, and Andrew Lakoff. 2005. On Regimes of Living. In Aiwa Ong and Stephen Collier, ed. *Global Assemblages*. London: Blackwell, 22-53.

## TOPIC I: LANGUAGES OF CYBORG LIFE

### September 18, 20: Post-Human Bodies

Seltin, Jon. 2009. Production of the Post-Human: Political Economies of Bodies and Technologies. *Parrhesia*, 8: 43-59.

Thacker, Eugene. 2003. Data Made Flesh Biotechnology and the Discourse of the Posthuman, *Cultural Critique*, 53: 73-99.

Hayles, N. Katherine. 2005. Computing the Human. *Theory Culture Society*, 22: 131-153.

### September 25, 27: Manifesting the Cyborg

Haraway, Donna. 1991. A Cyborg Manifesto. *Simians, Cyborgs, and Women*, 149-182.

Gandy, Matthew. 2010. The Persistence of Complexity: Re-reading Donna Haraway's Cyborg Manifesto. *AA Files*, 60.

**October 2, 4: Film Noir: Expelling the Cyborg?**

\*Commentary this week is due Wednesday, Oct. 3<sup>rd</sup> at noon.

Watch: Scott, Ridley. 1982. *Blade Runner*.

*Recommended:* Dick, 1968. Philip K. Do Androids Dream of Electric Sheep? Available at: <http://www.kejymen.sk/dadoes.pdf>.

**TOPIC II: POLITICAL BIOLOGIES / BIOLOGICAL POLITICS**

**October 9, 11: Emerging Political Forms: Sovereignty and Biopolitics I**

**\*\*Essay 1 Due\*\***

Foucault, Michel. 1978. The Right of Death and Power over Life. *A History of Sexuality*. New York: Random House, 135-159.

**October 16, 18: Emerging Political Forms: Sovereignty and Biopolitics II**

Bruce, Braun. Biopolitics and the molecularization of life. *Cultural Geography*, 14: 6-28.

Hinchliffe, S., J. Allen, S. Lavau, N. Bingham, and S. Carter. 2012. Biosecurity and the topologies of infected life: from borderlines to borderlands. *Trans. Of the Inst. Of Brit. Geographers*, Forthcoming.

*Watch:* Selections from Food, Inc.

**October 23, 25: Cold War / Post-Cold War Bodies**

Masco, Joseph. 2004. Mutant Ecologies. *Cultural Anthropology*, 19 (4): 517-550

Petryna, Adriana. 2004. "Biological Citizenship: The Science and Politics of Chernobyl Exposed Populations. *Osiris*, 19: 250-265.

**October 30, November 1: Biologies/Ecologies of Empire**

Kosek, Jake. 2010. Ecologies of Empire: On the new uses of honeybees. *Cultural Anthropology*, 25 (4): 650-678.

Zerner, Charles. 2010. Stealth Nature: Biomimesis and the Weaponization of Life. In Ilana Feldman and Miriam Ticktin, eds. *In the Name of Humanity*, Durham: Duke University Press, 290-326.

**TOPIC III: TECHNO-BIOLOGICAL REPRODUCTIONS**

**November 6, 8: Patenting Life & Bio-Knowledge Productions**

**\*\*Essay 2 Due\*\***

**\*\*Topics for final project must be discussed with your instructor by Nov. 9<sup>th</sup>\*\***

Jansanoff, Sheila. 2012. Taking Life: Private Rights in Public Nature. In Sunder-Rajan, ed.,

*Lively Capital*, Durham: Duke University Press, 155-183.

Sunder-Rajan, Kaushik. 2006. Introduction: Capitalisms and Biotechnologies, Exchange and Value, and Life and Debt. In *Biocapital*, Durham: Duke University Press, 1-76.

#### **November 13, 15: Global Pharmaceuticals**

Petryna, Adriana, and Arthur Kleinman. 2006. The Pharmaceutical Nexus. In Petryna and Kleinman, eds. *Global Pharmaceuticals*, Durham: Duke University Press, 1-22.

Healy, David. 2006. The New Medical Oikumene. In Petryna and Kleinman, eds. *Global Pharmaceuticals*, Durham: Duke University Press, 61-84.

Lakoff, Andrew. Diagnostic Liquidity. In Sunder-Rajan, ed., *Lively Capital*, Durham: Duke University Press, 251-275.

Kao, Wen-Hua. 2012. Transforming States in the Era of Global pharmaceuticals: Visioning Clinical Research in Japan, Taiwan, and Singapore. In Sunder-Rajan, ed., *Lively Capital*. Durham, NC: Duke, 279-305.

#### **November 20: Reproductive Lives**

Walby, Catherine and Melinda Cooper. 2010. From reproductive work to regenerative labour: The female body and the stem cell industries. *Feminist Theory*, 11(1) 3-22.

Bennett, Jane. 2011. Stem Cells and the Culture of Life. *Vibrant Matter*, Durham: Duke, 82-93.

Franklin, Sarah. 2006. Stem cells r us: emergent life forms and the global biological. In Aihwa Ong and Stephen Collier, eds. *Global Assemblages: Technology, Politics and Ethics as Anthropological Problems*, Oxford: Blackwell, 59-78.

#### **November 27, 29: Tissue Economies & Transplantation**

**\*\*Annotated Bibliography Due, November 29<sup>th</sup>\*\***

Scheper-Hughes, Nancy. 2000. The global traffic in human organs. *Current Anthropology*, 41(2): 191-224.

Sharp, Lesley. 2000. The Commodification of the Body and its Parts. *Annual Review of Anthropology*, 29: 287-328

Cohen, Lawrence. 2006. Operability, bioavailability, and exception. In Aihwa Ong and Stephen Collier, eds. *Global Assemblages: Technology, Politics and Ethics as Anthropological Problems*, Oxford: Blackwell, 79-103.

#### **December 4, 6: Xeno-Transplantation, Hybrid Cells and Future Chimeras**

Squires, Susan. 2004. The Hybrid Embryo and Xenogenic Desire. In *Liminal Lives: The Frontiers of Biomedicine*. Durham: Duke University Press, 89-111.

Lesley Sharp. 2011. Monkey Business: Interspecies Longing and Scientific Prophecy in Experimental Xenotransplantation. *Social Text*, 2011.

December 11, 13: Student Presentations  
***\*\*Essay 3 Due\*\****

**ACADEMIC DISHONESTY**

Academic dishonesty in any portion of the academic work for a course is grounds for awarding a grade of F or N for the entire course. All work you submit must be your own. When you use other peoples' ideas in your assignments, you must acknowledge the source.

**LIFE INTERRUPTIONS**

Students are expected to submit work at the times scheduled in the syllabus. Possible exceptions include serious illness, family emergency, or other legitimate conflict. If these apply, you must contact me directly to request an extension or makeup. Make these arrangements as soon as you know of the conflict--*BEFORE* the due date if possible.

**SPECIAL NEEDS**

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact me and the McBurney Resource Center located at 702 W. Johnson Street, Suite 2104 <http://www.mcburney.wisc.edu> /608-263-2741 to discuss individual needs for accommodations.